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## 199—45.16(476) Appendix C – Levels 2 to 4: standard application form.

## LEVELS 2 TO 4:

## STANDARD INTERCONNECTION REQUEST APPLICATION FORM (For Distributed Generation Facilities 10 MVA or less)

Interconnection Customer Contact Information

Mailing Address:  City: State: Zip Code: Telephone (Daytime): (Evening): E-Mail Address:  Alternative Contact Information (if different from Customer Contact Information)  Name: Mailing Address: Zip Code: Telephone (Daytime): (Evening): E-Mail Address:  City: State: Zip Code: Telephone (Daytime): (Evening): Facsimile Number: E-Mail Address: Zip Code: Utility Serving Facility Site: Account Number of Facility Site (existing utility customers): Inverter Manufacturer: Model: Equipment Contractor  Name: Mailing Address: City: State: Zip Code: (Evening): Facsimile Number: E-Mail Address: Zip Code: City: State: Zip Code: City: City: State: Zip Code: City: City: State: Zip Code: City: State: State	State:   Zip Code:   Clevening):   State:   Zip Code:   Clevening):   Clevening):   Clevening):   Clevening):   Clevening):   Clevening):   Clevening):   Clevening):   Clevening:   Clev	Name:		
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Alternative Contact Information (if different from Customer Contact Information)  Name:	Alternative Contact Information (if different from Customer Contact Information)  Alame:	Telephone (Daytime):	(Evening):	
Name:  Mailing Address:  City:  State:  City:  Telephone (Daytime):  Facsimile Number:  City:  State:  City:  State:  E-Mail Address:   City:  State:  Zip Code:  City:  City:  State:  City:  Utility Serving Facility Site:  Account Number of Facility Site (existing utility customers):  Inverter Manufacturer:  Model:  Equipment Contractor  Name:  Mailing Address:  City:  State:  City:  State:  City:  State:  Cip Code:  Evening):  Facsimile Number:  E-Mail Address:  Electrical Contractor (if different from Equipment Contractor)  Name:  Mailing Address:  City:  State:  Electrical Contractor (if different from Equipment Contractor)  Name:  Mailing Address:  City:  State:  City:  City:  State:  City:  State:  City:  State:  City:  State:  City:  City:  City:  State:  City:  City:  City:  State:  City:  Cit	Alailing Address:	Facsimile Number:	E-Mail Address: _	
Mailing Address:  City: State: Zip Code: Telephone (Daytime): E-Mail Address:  Facility Address (if different from above):  City: State: Zip Code: Utility Serving Facility Site: Account Number of Facility Site (existing utility customers): Inverter Manufacturer: Model: Model: Equipment Contractor  Name: Mailing Address: City: State: Zip Code: Telephone (Daytime): E-Mail Address: E-Mail Address: E-Mail Address: E-Mail Address: E-Mail Address: E-Mail Address: E-Mailing Address: E-Mailing Address: E-Mail Address: E-Mailing Address: E-Mailing Address: E-Mail Address: E-Mailing Add	Alalling Address:	Alternative Contact Information (if diffe	erent from Customer Contact I	nformation)
Mailing Address:  City: State: Zip Code: Telephone (Daytime): E-Mail Address:  Facility Address (if different from above):  City: State: Zip Code: Utility Serving Facility Site: Account Number of Facility Site (existing utility customers): Inverter Manufacturer: Model: Model: Equipment Contractor  Name: Mailing Address: City: State: Zip Code: Telephone (Daytime): E-Mail Address: E-Mail Address: E-Mail Address: E-Mail Address: E-Mail Address: E-Mail Address: E-Mailing Address: E-Mailing Address: E-Mail Address: E-Mailing Address: E-Mailing Address: E-Mail Address: E-Mailing Add	Alalling Address:	Name:		
City: State: Zip Code: Telephone (Daytime): (Evening): E-Mail Address: E-Mail Address: State: Zip Code: State: State: State: Zip Code: State:	State: Zip Code: elephone (Daytime):	Mailing Address:		
Facsimile Number:	Facility Address (if different from above):    State:	City:	State:	Zip Code:
Facsimile Number:	Facility Address (if different from above):    State:	Telephone (Daytime):	(Evening):	
Eacility Address (if different from above):  City:	State:   Zip Code:	Facsimile Number:	E-Mail Address: _	
Account Number of Facility Site (existing utility customers):  Inverter Manufacturer:    Model:	Account Number of Facility Site (existing utility customers):  Inverter Manufacturer:  Model:			
Account Number of Facility Site (existing utility customers):  Inverter Manufacturer:    Model:	Account Number of Facility Site (existing utility customers):  Inverter Manufacturer:  Model:	Facility Address (if different from above	/e):	
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Account Number of Facility Site (existing utility customers):  Inverter Manufacturer:    Model:	Account Number of Facility Site (existing utility customers):  Inverter Manufacturer:  Model:	Utility Serving Facility Site:		
Name:  Mailing Address:  City:	State   Zip Code	Account Number of Facility Site (exist	ing utility customers):	
Name:  Mailing Address:  City:	State   Zip Code	Inverter Manufacturer:	Model:	
Mailing Address:  City:	State:	Equipment Contractor		
Mailing Address:  City:	State:	Namo:		
City: State: Zip Code: Telephone (Daytime): (Evening): Facsimile Number: E-Mail Address:  Electrical Contractor (if different from Equipment Contractor)  Name: Mailing Address: Zip Code: Telephone (Daytime): (Evening): Telephone (Daytime): (Evening): Facsimile Number: E-Mail Address: License Number: E-Mail Address:  Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts)	State: Zip Code: felephone (Daytime): (Evening): facsimile Number: E-Mail Address:  Flectrical Contractor (if different from Equipment Contractor)  Name: Mailing Address:  State: Zip Code: Felephone (Daytime): (Evening): Facsimile Number: E-Mail Address:  Flectric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts) Five of Service: Single Phase Three Phase  Fig Phase Transformer, Indicate Type: Polita	Mailing Address:		
Electrical Contractor (if different from Equipment Contractor)  Name:  Mailing Address:  City:  Telephone (Daytime):  Facsimile Number:  License Number:  Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity:  (Amps) Voltage:  (Volts)	Electrical Contractor (if different from Equipment Contractor)  Name:  Mailing Address:  City: State: Zip Code:  Celephone (Daytime): (Evening):  Cacsimile Number: E-Mail Address:  Cicense Number: (Evening):  Cicense Number: (Formation for Customer Facility where Generator will be Interconnected Capacity: (Amps) Voltage: (Volts)  Type of Service: Single Phase Three Phase  Capacity Winding Wye Delta	Oit ::	Stata	Zin Codo:
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Electrical Contractor (if different from Equipment Contractor)  Name:  Mailing Address:  City:  Telephone (Daytime):  Facsimile Number:  License Number:  Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity:  (Yolts)	State:   Zip Code:   Zip Cod	Telephone (Daytime):	(Evening):	
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Mailing Address:  City: State: Zip Code:  Telephone (Daytime): (Evening):  Facsimile Number: E-Mail Address:  License Number:  Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts)	Mailing Address:  City: State: Zip Code:  Glephone (Daytime): (Evening):  Facsimile Number: E-Mail Address:  Cicense Number: (Evening):  Clectric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts)  Type of Service: Single Phase Three Phase  Capacity: Yolts  Three Phase  Capacity: Yolts  Capacity:	Electrical Contractor (if different from	Equipment Contractor)	
City: State: Zip Code: Telephone (Daytime): (Evening): Facsimile Number: E-Mail Address: License Number:  Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts)	City: State: Zip Code: Elephone (Daytime): (Evening): Eacsimile Number: E-Mail Address: License Number: (Evening): Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts) Expression of Service: Single Phase Three Phase  Fig. Phase Transformer, Indicate Type: Primary Winding Wye Delta	Name:		
City: State: Zip Code: Telephone (Daytime): (Evening): Facsimile Number: E-Mail Address: License Number:  Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts)	City: State: Zip Code: Elephone (Daytime): (Evening): Eacsimile Number: E-Mail Address: License Number: (Evening): Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts) Expression of Service: Single Phase Three Phase  Fig. Phase Transformer, Indicate Type: Primary Winding Wye Delta	Mailing Address:		
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Facsimile Number: E-Mail Address: License Number: Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts)	Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity:(Amps) Voltage:(Volts)  Type of Service:Single PhaseThree Phase  Three Phase Transformer, Indicate Type:  Primary Winding Wye Delta	Telephone (Daytime):	(Evening):	
License Number:  Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Amps) Voltage: (Volts)	Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity:(Amps) Voltage:(Volts)  Type of Service: Single Phase Three Phase  Three Phase Transformer, Indicate Type:  Primary Winding Wye Delta	Facsimile Number:	E-Mail Address:	
Electric Service Information for Customer Facility where Generator will be Interconnected  Capacity: (Volts)	Capacity:(Amps) Voltage:(Volts) Type of Service:Single PhaseThree Phase  Three Phase Transformer, Indicate Type: Primary WindingWye Delta	License Number:	<del></del>	
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Capacity:(Amps) Voltage:(Volts)	Type of Service: Single Phase Three Phase  Three Phase Transformer, Indicate Type:  Primary Winding Wye Delta	Electric Service Information for Custo	mer Facility where Generator v	will be Interconnected
Type of Service: Single Phase	Type of Service: Single Phase Three Phase  Three Phase Transformer, Indicate Type:  Primary Winding Wye Delta	Canacity: (Amps) Voltac	ne. (Volte)	
	f 3 Phase Transformer, Indicate Type: Primary Winding Wye Delta	Type of Service: Single Phase	Three Phase	
Type of Dervice Single Phase Three Phase	Primary Winding Wye Delta	Type of Service Single Phase	Three Flase	
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Secondary Winding Wye Delta	ransformer Size: Impedance:	Transformer Size:	Impedance:	
Secondary Winding Wye Delta	Transferment Circ.	Transfermer Size:		

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Intent of Ge	<u>neration</u>
	Offset Load (Unit will operate in parallel, but will not export power to utility)
	Net Metering (Unit will operate in parallel and will export power to utility pursuant to lowa Utilities Board rule 199 IAC 15.11(5) and the utility's net metering or net billing tariff)
	Self-Use and Sales to the Utility (Unit will operate in parallel and may export and sel excess power to utility pursuant to Iowa Utilities Board rule 199 IAC 15.5 and the utility's tariff)
_	Wholesale Market Transaction (Unit will operate in parallel and participate in MISO or other wholesale power markets pursuant to separate requirements and agreements with MISO or other transmission providers, and applicable rules of the Federal Energy Regulatory Commission)
	Back-up Generation (Units that temporarily operate in parallel with the electric distribution system for more than 100 milliseconds)
	e: Back-up units that do not operate in parallel for more than 100 milliseconds do not d an interconnection agreement.
Generator 8	Prime Mover Information
	rgy Source (Hydro, Wind, Solar, Process Byproduct, Biomass, Oil, Natural Gas, Coal,
Ene	rgy Converter Type (Wind Turbine, Photovoltaic Cell, Fuel Cell, Steam Turbine, etc.):
Ger	nerator Size: kW or kVA Number of Units:
Tota	al Capacity: kW or kVA
Ger	nerator Type (Check one): Induction Inverter Synchronous Other:
Requested I	Procedure Under Which to Evaluate Interconnection Request
Please indic	ate below which review procedure applies to the interconnection request. The review sed is subject to confirmation by the utility.
_	<u>Level 2</u> – Lab-certified interconnection equipment with an aggregate electric nameplate capacity less than or equal to 2 MVA. Lab-certified is defined in lowa Utilities Board Chapter 45 rules on Electric Interconnection of Distributed Generation Facilities (199 IAC 45.1). (Application fee is \$100 plus \$1.00 per kVA.)
_	<u>Level 3</u> – Distributed generation facility does not export power. Nameplate capacity rating is less than or equal to 50 kVA if connecting to area network or less than or equal to 10 MVA if connecting to a radial distribution feeder. (Application fee amount is \$500 plus \$2.00 per kVA.)

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Level 4 - Nameplate capacity rating is less than or equal to 10 MVA and the

distributed generation facility does not qualify for a Level 1, Level 2, or Level 3 review, or the distributed generation facility has been reviewed but not approved under a Level 1, Level 2, or Level 3 review. (Application fee amount is \$1,000 plus \$2.00 per kVA, to be applied toward any subsequent studies related to this application.)
Note: Descriptions for interconnection review categories do not list all criteria that must be satisfied. For a complete list of criteria, please refer to lowa Utilities Board Chapter 45 rules on Electric Interconnection of Distributed Generation Facilities (199 IAC 45).
<u>Distributed Generation Facility Information</u> :  Commissioning Test Date:
List interconnection components/systems to be used in the distributed generation facility that are lab-certified.
Component/System NRTL Providing Label & Listing  1
2
S
4
Please provide copies of manufacturer brochures or technical specifications.
Energy Production Equipment/Inverter Information:
Synchronous Induction Inverter Other:
Synchronous Induction Inverter Other:  Rating: kW Rating: kVA  Rated Voltage: Volts  Rated Current: Amps
System Type Tested (Total System): Yes No; attach product literature

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## For Synchronous Machines:

<u>Note</u> : Contact utility to determine if all the information requested in this section is required for the proposed distributed generation facility.
Manufacturer:
Manufacturer: Version No.:
Submit copies of the Saturation Curve and the Vee Curve
Salient Non-Salient
Torque: Ib-ft Rated RPM: Field Amperes: at rated generator
voltage and current and% PF over-excited
Type of Exciter:
Output Power of Exciter:
Type of Voltage Regulator:
Type of Voltage Regulator:  Locked Rotor Current: Amps Synchronous Speed: RPM  Winding Connection: Amps Synchronous Speed: RPM
Winding Connection: Min. Operating Freq./Time: Generator Connection: Delta Wye Grounded
Generator Connection: Delta Wye Wye Grounded
Direct-axis Synchronous Reactance: (Xd) ohms
Direct-axis Transient Reactance: (X'd) onms
Direct-axis Sub-transient Reactance: (X"d) onms
Zero Seguence Reactance: onms
Direct-axis Synchronous Reactance: (Xd) ohms  Direct-axis Transient Reactance: (X'd) ohms  Direct-axis Sub-transient Reactance: (X''d) ohms  Negative Sequence Reactance: ohms  Zero Sequence Reactance: ohms  Neutral Impedance or Grounding Resister (if any): ohms
Tredital impedance of Grounding resister (if any).
For Induction Machines:
Note: Contact utility to determine if all the information requested in this section is required for the proposed distributed generation facility.
Manufacturor
Manufacturer: Version No.: Version No.: Amps
Locked Rotor Current: Amps
Rotor Resistance (Rr): ohms Exciting Current: Amps
Rotor Reactance (Xr): ohms Reactive Power Required:
Magnetizing Reactance (Xm): ohmsVARs (No Load)
Stator Resistance (Rs):ohmsVARs (Full Load)
Stator Reactance (Xs): ohms
Short Circuit Reactance (X''d): ohms
Phases: Single Three-Phase
Frame Size: Design Letter: Temp. Rise:°C.
Reverse Power Relay Information (Level 3 Review Only):
Manufacturer:
Relay Type: Model Number:
Reverse Power Setting:
Reverse Power Time Delay (if any):

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Additional information for inverter-based facilities.
Inverter Information:
Manufacturer: Model: Type: Forced Commutated Line Commutated Rated Output: Watts Volts Efficiency: % Power Factor: % Inverter UL1741 Listed: Yes No
DC Source/Prime Mover:
Rating: kW Rating: kVA Rated Voltage: Volts Open Circuit Voltage (if applicable): Volts Rated Current: Amps Short Circuit Current (if applicable): Amps
Other Facility Information:
One-Line Diagram – A basic drawing of an electric circuit in which one or more conductors are represented by a single line and each electrical device and major component of the installation, from the generator to the point of interconnection, are noted by symbols.
One-Line Diagram attached: Yes
Plot Plan – A map showing the distributed generation facility's location in relation to streets, alleys, or other geographic markers.
Plot Plan attached: Yes
Customer Signature:
I hereby certify that all of the information provided in this Interconnection Request Application Form is true.
Applicant Signature:
Title: Date:
An application fee is required before the application can be processed. Please verify that the appropriate fee is included with the application:
Amount:
Utility Acknowledgement:
Receipt of the application fee is acknowledged and this interconnection request is complete.
Utility Signature: Date: Date:
Printed Name:

[ARC 8859B, IAB 6/16/10, effective 7/21/10]